

Art Unit: 2829

10/037607

SD

07/27/04

CLAIMS 1 THROUGH 40 ARE CANCELLED

41. (currently amended) A contact system for a semiconductor component having a plurality of terminal contacts comprising:

a board comprising a plurality of contacts in electrical communication with external circuitry;

a substrate configured to slide on the board comprising a plurality of flexible segments configured to move independently of one another and a plurality of contactors on the flexible segments configured to simultaneously electrically engage the contacts and the terminal contacts;

each contactor comprising a first contact on a ~~first side of the substrate~~ flexible segment configured to electrically engage a terminal contact on the component, and ~~an anisotropic~~ a conductive polymer layer on a second opposing side of the ~~substrate~~ flexible segment in electrical communication with the first contact configured to electrically engage a contact on the board.

42. (currently amended) The contact system of claim 41 wherein the substrate comprises a plurality of grooves separating the contactors and ~~forming the~~ flexible segments,
~~for the contactors~~

Art Unit: 2829

43. (previously presented) The contact system of claim 41 further comprising a test handler configured to place and hold the component on the substrate.

44. (currently amended) The contact system of claim 41 wherein the substrate slides in a z-direction on pins attached to the board.
~~is configured to float on the board.~~

45. (previously presented) The contact system of claim 41 wherein the terminal contacts comprise an element selected from the group consisting of leads, bumps and pads.

46. (previously presented) The contact system of claim 41 wherein the external circuitry comprises test circuitry.

47. (currently amended) A contact system for a semiconductor component having a plurality of terminal contacts comprising:

~~an interface a board comprising at least one a~~
plurality of interface contacts in electrical communication with external circuitry and a plurality of pins;

~~a substrate on the board~~ slidably mounted on the pins
having a ~~first side and an opposing second side~~ plurality
of flexible segments configured to move independently of
one another;

Art Unit: 2829

~~at least one~~ a plurality of contactors on the substrate flexible segments configured to simultaneously electrically engage the interface contacts and the terminal contacts;

~~the each~~ each contactor comprising a first contact on ~~the a~~ a first side of a flexible segment configured to electrically engage ~~the a~~ a terminal contact, a second contact on ~~the a~~ a second side of the flexible segment in electrical communication with the first contact, and ~~an anisotropic a~~ a conductive polymer layer configured to electrically engage the second contact and ~~the a~~ a interface contact.

48. (currently amended) The contact system of claim 47 wherein the substrate comprises a plurality of grooves on either side of the contactors forming the ~~providing a~~ flexible segments.
~~on the substrate for the contactor.~~

49. (currently amended) The contact system of claim 47 wherein the ~~anisotropic~~ conductive polymer layer comprises an elastomeric base material and a plurality of conductive particles in the base material configured to electrically engage the ~~interface~~ contact.

50. (previously presented) The contact system of claim 47 wherein the terminal contact comprises a lead and the first contact comprises a pad configured to physically engage the lead.

51. (withdrawn and currently amended) The contact system of claim 47 wherein the terminal contact comprises a bump and the first contact comprises an indentation for the bump.

Art Unit: 2829

52. (withdrawn) The contact system of claim 47 wherein the terminal contact comprises a pad and the first contact comprises a bump for engaging the pad.

53. (previously presented) The contact system of claim 47 wherein the component comprises an element selected from the group consisting of packages, ball grid array devices, and modules.

54. (currently amended) A contact system for a semiconductor component having a plurality of terminal contacts comprising:

~~an interface~~ a board comprising a plurality of ~~interface~~ contacts in electrical communication with an external circuitry;

a substrate ~~on~~ slidably mounted to the interface board for movement in a z-direction and having a first side, an opposing second side, and a plurality of grooves from the first side to the second side forming a plurality of flexible segments;

a plurality of contactors on the flexible segments configured to move independently of one another and to simultaneously electrically engage the ~~interface~~ contacts and the terminal contacts;

each contactor comprising a first contact on the first side of a flexible segment configured to electrically engage the terminal contact, a second contact on the second side of the flexible segment in electrical communication with the first contact, and ~~an anisotropic~~ a conductive polymer layer configured to electrically engaging engage the second contact and ~~an interface~~ a contact.

Art Unit: 2829

55. (previously presented) The contact system of claim 54 wherein the first contact and the second contact comprise an element selected from the group consisting of gold and platinum.

56. (currently amended) The contact system of claim 54 wherein the ~~anisotropic~~ conductive polymer layer comprises an elastomeric base material and a plurality of conductive particles in the base material.

57. (currently amended) The contact system of claim 54 wherein the conductive polymer layer comprises a plurality of particles configured to penetrate the second contacts.

~~flexible segments allow the contactors to move independently to accommodate dimensional variations in the terminal contacts.~~

58. (currently amended) A contact system for a semiconductor component having a plurality of terminal contacts comprising:

a test circuitry configured to apply test signals to the component;

a test handler configured to move and support the component;

a board comprising a plurality of contacts in electrical communication with the test circuitry;

a substrate on the board comprising a plurality of independent flexible segments and a plurality of contactors on the flexible segments configured under a force applied by the test handler to the component to simultaneously electrically engage the contacts and the terminal contacts;

Art Unit: 2829

each contactor comprising a first contact on a first side of ~~the substrate~~ a flexible segment configured to electrically engage a terminal contact on the component, and a second contact on a second opposing side of the ~~substrate~~ flexible segment in electrical communication with the first contact, and ~~an anisotropic~~ a conductive polymer layer configured to electrically engage the second contact and a contact on the board.

59. (previously presented) The contact system of claim 58 wherein the substrate is configured to float in a Z-direction on the board,

60. (currently amended) The contact system of claim 58 wherein the substrate comprises a plurality of grooves electrically isolating the contactors and forming the flexible segments.
~~on the substrate for the contactors.~~

CLAIMS 61 THROUGH 77 ARE CANCELLED